

**Notice of Allowability**

Application No.

10/753,460

Applicant(s)

SUENAGA ET AL.

Examiner

Art Unit

Robert Rose

3723

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/9/04, 8/20/04.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on 09 January 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date see item 9.
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other 4/9/04, 8/20/04.

ROBERT A. ROSE  
PRIMARY EXAMINER  
ART UNIT 323



### REASONS FOR ALLOWANCE

1. Receipt is acknowledged of Applicant's Preliminary Amendment, filed January 9, 2004.
2. Receipt is acknowledged of Applicant's Prior Art Statements, filed April 9, 2004, and August 20, 2004, respectively.
3. The following is an examiner's statement of reasons for allowance:

Applicant's invention relates to a polishing composition having a specified particle size distribution, and a polishing method for reducing "microwaviness" as defined in the specification as having both short wavelength(50um to 500um) and long wavelength(500um to 5mm) of the roughness, to produce a magnetic disk substrate of improved smoothness, allowing lowered magnetic head flying heights.

While conventional silica compositions are employed, the particle size distribution is adjusted such that the formulas set forth in claim 1 are satisfied. The average particle size on the number basis, and standard deviation on the number basis are satisfied in addition to satisfying a relationship between the particle size and cumulative volume frequency within the specified range of particle size. Formula(1) is an index showing the spread of the particle size distribution of the silica particles, and is satisfied from the viewpoint of improving the polishing rate. Formulas(2) and (3) are indices each showing a ratio of silica particles existing therein. These formulas are satisfied from the viewpoint of improving the microwaviness of the substrate, thereby improving the smoothness of the finished surface.

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None of the references cited satisfy the conditions set forth in the formulas of independent claim 1. The closest prior art, Japan 2002-30274, achieves a reduced average surface waviness, however, the reduction of short wavelength and long wavelength waviness are not addressed. Other art cited of interest also show conventional slurries with average particle size distributions which are not adjusted so as to address the reduction in microwaviness of the final product.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

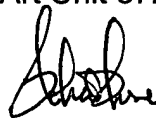
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Rose whose telephone number is (571) 272-4494. The examiner can normally be reached on 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert Rose  
Primary Examiner  
Art Unit 3723



Rr

February 7, 2005.